Remarks

I. Status of claims

Claims 1-20 were pending.

Claims 12, 16, and 18-20 have been canceled without prejudice.

Claims 21-26 have been added. New independent system claim 23 recites elements that essentially track the elements of independent method claim 1, and new independent system claim 25 recites elements that essentially track the elements of independent method claim 9.

Only claim 9 has been rejected on the basis of prior art.

II. Objections to the specification

The specification has been amended to correct the error noted by the Examiner.

III. Objections to the claims

The claims have been amended in ways that address the objections noted by the Examiner.

IV. Claim rejections under 35 U.S.C. § 112

The claims have been amended in ways that address the Examiner's indefiniteness rejections under 35 U.S.C. § 112, second paragraph.

V. Double patenting rejections

Claims 16 and 18-20 have been canceled rendering the double patenting rejections moot.

VI. Claim rejections under 35 U.S.C. § 102

The Examiner has rejected claim 9 under 35 U.S.C. § 102(e) over Kawano (U.S. 6,897,983).

Independent claim 9 has been amended and now recites:

9. A method, comprising:

> dividing a color digital image into a plurality of image areas;
>
> for each of the image areas, calculating a respective color conversion matrix based on the color values of the image area; and
>
> color converting each of the image areas by applying the respective color conversion matrix to color values of the image area.

Kawano discloses an image processor 14 that includes a color correction section 24, which "applies a color correction process to the density signal outputted from the input gradation correcting section 23 for permitting the image output unit 15 to provide faithful color reproduction" (col. 15, lines 6-9; also see FIG. 2). Kawano also discloses that "the image processor 14 may be arranged such that the color correcting section 24 includes a color conversion section which converts the RGB-base image data to the L*a*b*-base image data" (col. 25, lines 19-23). Kawano, however, does not provide any details whatsoever regarding the way in which the color correction section 24 "applies a color correction process to the density signal outputted from the input gradation correcting section 23" or "converts the RGB-base image data to the L*a*b*-base image data." Accordingly, Kawano does not teach the calculating element of claim 9 nor does Kawano teach the color converting element of claim 9.

In support of the rejection of claim 9, the Examiner has stated that (emphasis added):

> Regarding claim 9, Kawano discloses
>
> • Dividing the picture area of said color picture image into a plurality of smaller pixel areas, each pixel having a plurality of pixel values each corresponding to a different color channel [Fig. 2, ref. 25; Col. 15, lines 20-25. Note that the image is separated (i.e., divided) into smaller areas; further note that each pixel has R, G and B colors (Col. 15, lines 12-15)]
>
> • processing said pixel values for each respective pixel in each respective pixel group, using a first color conversion matrix, said first color conversion matrix being based on said pixel values in each respective pixel group [Fig. 2, refs. 26 & 27 (filtering according to separation result); Col. 15, lines 43-46. Note that the spatial filtering is used to change the colors of the pixels and therefore is considered as color conversion. (See also claim 3 of this instance application where Cor_{NN}, which deals with noise, is part of the color conversion) Note further that the characteristic of the filtering is adjusted for each area and

therefore is based on the pixel values of the area (since the separation is based on image data, i.e., pixel values, see Col. 15, lines 20-22). Finally, Fig. 3, the block labeled "Filter Control Unit U shows that the filters (i.e., the color conversion functions) are represented as matrices]

It appears that the Examiner has misinterpreted Kawano's disclosure. In particular, the disclosure in col. 15, lines 12-15, 20-25, and 43-46, relates to the image processing steps that are performed after the color correction process has been applied to the density signal outputted from the input gradation correction section 23. For example, in col. 15, lines 8-11, Kawano explains that "... the A/D conversion, shading correction, input gradation correction and color correction will be collectively referred to as 'preprocess.'" The image separation process cited by the Examiner is performed on the preprocessed data (see col. 15, lines 15-25; also see the arrows pointing from the color correcting section 24 to the image area separation processing section 25 in FIG. 2). None of the processing steps disclosed in the sections of Kawano relied upon by the Examiner involves color converting areas of an image.

In addition, contrary to the Examiner's position, one skilled in the art at the time the invention was made would not have had any reasonable basis for believing that "the spatial filtering is used to change the colors of the pixels and therefore is considered as color conversion." Indeed, one skilled in the art would have known that spatial filtering is used to change color values in order to sharpen or blur an image, whereas color conversion involves converting colors from one color space to another. Even Kawano treats the color correction/color conversion processes that are performed by the color correcting section 24 as separate and distinct from the spatial filtering process that is performed by the spatial filter processing section 27 (see, e.g., FIG. 2).

For at least these reasons, the Examiner's rejection of claim 9 under 35 U.S.C. § 102(e) over Kawano should be withdrawn.

VII. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

Charge any excess fees or apply any credits to Deposit Account No. 08-2025.

Respectfully submitted,

Date: June 5, 2007

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